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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,847	01/16/2004	Masahiko Arai	62807-156	5086

7590

11/01/2006

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EXAMINER

YEE, DEBORAH

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/757,847	ARAI ET AL.	
	Examiner	Art Unit	
	Deborah Yee	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 10-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9-20-04; 1-16-04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 10 to 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9-15-06.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 to 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 7-0713.
4. The English abstract of JP'713 discloses a steel alloy having a composition with constituents whose wt% ranges overlap those recited by the claims; such overlap establishes a prima facie case of obviousness because it would be obvious to one of ordinary skill in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art since the prior art teaches the same utility (turbine component) and similar properties of high temperature strength and toughness, see MPEP 2144.05.
5. More specifically, JP'713 in Table on page 4 discloses examples 2 to 5 which closely meet the claimed composition and when calculated, satisfy the claimed provisos in figures 2,4 and 6. Although prior art examples contain slightly higher amounts of Mn

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and slightly lower amounts of Mo then recited by the claims, such would not be a patentable difference since applicant has not demonstrated (e.g. by comparative test data) that the more narrowly claimed ranges are somehow critical and productive of new and unexpected. Hence without criticality, then a composition with 0.6% Mn vs. a composition with slightly more (say 0.67%) Mn would depict a mere difference in the proportion of element without any attendant unexpected results and would not patentably distinguish claims over prior art.

6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 7-0713 as applied to claims 1 to 5, 8 and 9 above, and further in view Table 1.1 in the Introduction to Steels and Cast irons publication.

7. JP'713 closely meets the claimed composition for the reasons set forth in paragraphs 4 and 5 except fails to additionally contain Re or B. It is, however, well known in the art that these elements are conventionally added to steel in small amounts to further enhance mechanical properties as evident by Table 1.1 publication; and hence would be a matter of choice and routine optimization well within the skill of the artisan to incorporate and produce no more than the known and expected effects from such additions.

8. Claims 1 to 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 57-207161.

9. The English abstract of JP'161 discloses a steel alloy having a composition with constituents whose wt% ranges overlap those recited by the claims; such overlap establishes a prima facie case of obviousness because it would be obvious to one of

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ordinary skill in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art since the prior art teaches the same utility (turbine component) and similar properties of high creep rupture strength and ductility, see MPEP 2144.05.

10. More specifically, JP'161 example 1 in Table 1 on page 347 meets the claimed composition except contains 0.49% Nb and is slightly outside the claimed Nb range of 0.02 to 0.3%. It would, however, be obvious to decrease Nb content since a broad Nb content of 0.3 to 0.7% is taught. Also when calculated, prior art steel 1 satisfies the claimed provisos in figures 2,4 and 6.

11. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 57-207161 as applied to claims 1 to 7 above, and further in view of Table 1.1 in The Introduction to Steels and Cast Irons publication.

12. JP'161 closely meets the claimed composition for the reasons set forth in paragraphs 9 and 10 except fails to additionally contains Ti, Cu, Al, Zr, Hf, Ca, Mg Y or rare earth elements. It is, however, well known in the art that these elements are conventionally added to steel in small amounts to further enhance mechanical properties as evident by Table 1.1 publication; and hence would be a matter of choice and routine optimization well within the skill of the artisan to incorporate and produce no more than the known and expected effects from such additions.

13. Claims 1 to 4,6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 58-217661 in view of Japanese patents 57-207161 or Japanese patent 7-70713.

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14. JP'661 steel 4 in Table 1 on page 333 meets the claimed composition and proviso in figures 2 and 4 except fails to include .02 to 0.1%N. It is, however, well known in the art that adding small amounts of N to a heat-resistant steel further enhances heat resistant properties as taught by JP'161, page 346 column 3, second paragraph; and JP'713, page 2, column 2, paragraph 8 base on an oral English translation by US Patent Office translator, Ms. Akiko Smith. Since heat resistant strength properties are desired and sought by JP'661, then it would be obvious modification well within the skill the artisan to incorporate to produce no more than the known and expected effect from such an addition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-27211253. The examiner can normally be reached on monday-friday 6:00am-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Deborah Yee
Primary Examiner
Art Unit 1742

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